

Title (en)

PREDICTIVE, ADAPTIVE POWER SUPPLY FOR AN INTEGRATED CIRCUIT UNDER TEST

Title (de)

VORAUSSAGENDE, ADAPTIVE STROMVERSORGUNG FÜR EINEN INTEGRIERTEN SCHALTSTROMKREIS IM TEST

Title (fr)

ALIMENTATION ADAPTATIVE ET PREDICTIVE D'UN CIRCUIT INTEGRE TESTÉ

Publication

EP 1470432 B1 20071205 (EN)

Application

EP 03707580 A 20030129

Priority

- US 0302581 W 20030129
- US 6299902 A 20020130
- US 20627602 A 20020725

Abstract (en)

[origin: US2002186037A1] A main power source supplies current through path impedance to a power terminal of an integrated circuit device under test (DUT). The DUT's demand for current at the power input terminal temporarily increases following edges of a clock signal applied to the DUT during a test as transistors within the IC switch in response to the clock signal edges. To limit variation (noise) in voltage at the power input terminal, an auxiliary power supply supplies an additional current pulse to the power input terminal to meet the increased demand during each cycle of the clock signal. The magnitude of the current pulse is a function of a predicted increase in current demand during that clock cycle, and of the magnitude of an adaption signal controlled by a feedback circuit provided to limit variation in voltage developed at the DUT's power input terminal.

IPC 8 full level

G01R 31/26 (2006.01); **G01R 31/28** (2006.01); **G01R 31/316** (2006.01); **G01R 31/317** (2006.01); **G01R 31/319** (2006.01); **G06F 1/26** (2006.01); **H01L 21/66** (2006.01)

CPC (source: EP KR US)

G01R 31/31721 (2013.01 - EP US); **G01R 31/319** (2013.01 - KR); **G01R 31/31924** (2013.01 - EP US); **G06F 1/26** (2013.01 - EP US); **G01R 31/2851** (2013.01 - EP US); **G01R 31/31905** (2013.01 - EP US)

Cited by

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Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

US 2002186037 A1 20021212; **US 6657455 B2 20031202**; CN 100454216 C 20090121; CN 1643389 A 20050720; EP 1470432 A2 20041027; EP 1470432 B1 20071205; JP 2005516226 A 20050602; KR 101024872 B1 20110331; KR 20040079960 A 20040916; US 2004075459 A1 20040422; US 2006022699 A1 20060202; US 2007257696 A1 20071108; US 6949942 B2 20050927; US 7245120 B2 20070717; US 7714603 B2 20100511; WO 03065064 A2 20030807; WO 03065064 A3 20031016

DOCDB simple family (application)

US 20627602 A 20020725; CN 03806458 A 20030129; EP 03707580 A 20030129; JP 2003564605 A 20030129; KR 20047011685 A 20030129; US 0302581 W 20030129; US 23709205 A 20050927; US 72582403 A 20031201; US 77918807 A 20070717